

What is claimed is:

1. A high output lighting device comprising:
  - 2 a support bracket having one end with a vertically extended arm and an opposing end with a lighting mounting bracket;
  - 4 an optic fiber having an receiving end and an emitting end supported by the vertically extended arm;
  - 6 multiple light emitting diodes supported by the lighting mounting bracket, the multiple light emitting diodes being spaced at a fixed distance from the receiving end of
  - 8 the optic fiber and being angled to focus light output on the optic fiber.

2. The high output lighting device of claim 1, further comprising a light emitting diode reflector assembly for each light emitting diode, the reflector mounted on the lighting mounting bracket, the reflector having a conical body with an open end and an opposite end holding the light emitting diode, and a heat sink coupled to the opposite end.

3. The lighting device of claim 2 wherein the conical body has a reflective interior surface and is shaped to focus light output from the light emitting diode to the optic fiber end.

4. The lighting device of claim 3 wherein the reflective interior surface is  
2 coated with evaporated aluminum.

5. The lighting device of claim 2 wherein the heat sink has a plate with one  
2 side attached to the conical body and an opposite side having protruding vanes.

6. The lighting device of claim 1 further comprising a heat sink thermally  
2 coupled to the multiple light emitting diodes.

7. The lighting device of claim 1 wherein the optic fiber has a core material  
2 and a surrounding cladding material.

8. The lighting device of claim 7 wherein the cladding material has an index  
2 of refraction which causes total internal reflection from light entering the receiving end of  
optic fiber.

9. The lighting device of claim 8 wherein the optic fiber includes a black  
2 jacket and emits light from the emitting end of the optic fiber.

10. The lighting device of claim 8 wherein the cladding material is translucent  
2 allowing light to leave the optic fiber along the perimeter of the optic fiber.

11. The lighting device of claim 8 wherein the optic fiber is bent in a non-linear shape.

12. The lighting device of claim 1, wherein the multiple LEDs emit different colors producing a combined color from the optic fiber.

13. The lighting device of claim 1, wherein the multiple LEDs emit the same color light.

14. The lighting device of claim 1 wherein the multiple LEDs are arranged symmetrically in relation to the optic fiber.

15. A high output light emitting diode based lighting device, comprising:  
2 a support bracket having a flat bottom surface and two opposite first and second ends;  
4 a vertical support arm attached to the first end of the support bracket;  
an optic fiber attached to the vertical support arm, the optic fiber having a core  
6 material and a surrounding cladding material with a flat receiving end fixed in relation to the support bracket;

8           a mounting arm attached to the second end of the support bracket, the mounting  
arm including multiple collars facing the receiving end of the optic fiber; and  
10           a light emitting diode reflector assembly attached to each of the multiple collars,  
the light emitting diode reflector assembly having a conical body having an open end  
12           mated with the collar, and an opposite closed end holding a light emitting diode.

16.       The lighting device of claim 15 wherein the conical body has a reflective  
2           interior surface and is shaped to focus light output from the light emitting diode to the  
optic fiber end.

17.       The lighting device of claim 16 wherein the reflective interior surface is  
2           evaporated aluminum.

18.       The lighting device of claim 15 further comprising a heat sink thermally  
2           coupled to the light emitting diodes.

19.       The lighting device of claim 15 wherein the light emitting diode assembly  
2           includes a heat sink having a plate with a top side coupled to the conical body and a  
bottom side having protruding vanes.

20. The lighting device of claim 15 wherein the optic fiber includes a black  
2 jacket and emits light from the emitting end of the optic fiber.

21. The lighting device of claim 15 wherein the cladding material is  
2 translucent allowing light to leave the optic fiber along the perimeter of the optic fiber.

22. The lighting device of claim 15 wherein the optic fiber is bent in a non-  
2 linear shape.

23. The lighting device of claim 15, wherein the multiple LEDs emit different  
2 colors producing a combined color from the optic fiber.

24. The lighting device of claim 15, wherein the multiple LEDs emit the same  
2 color light.